About CREST

Centers for Research Excellence in Science and Technology

The following slideshow contains much of the same information about CREST that is given to

- NSF Merit Reviewers
- National conferences and society meetings
- Current PIs
- Prospective proposal writers
- CREST site visitors and NSF Committees of Visitors

CREST

Program Data

- Established in 1987, funded at $10 M to $14 M annually
- 58 awards since 1987, 8 graduated Centers, 14 Centers currently active
- Mandated to "*support infrastructure improvements for national competitiveness in research at U.S. minority-serving institutions (MSIs).*"
- 5-year, $5 M Cooperative Agreements. Renewable for a second phase of up to 5 years, $5 M
- Program Solicitation: NSF 04-574
- Proposals Due: January 21, 2005

CREST

Areas of Support

- Research projects
- Links with other centers of research and education
- Faculty hires/Visiting faculty
- Expanded student career options
- Equipment/Instrumentation

CREST

NSF Expectations

- Institutional priorities consistent with project
- Potential to reach national and international standards of excellence
- Ability to produce demonstrable achievements within award period
- Potential to develop national and international competitiveness
- Infuse research with education & education with research

CREST

Institutional Commitment

- Provision of appropriate resources
- Institutional leadership and endorsement
- Tenured faculty from multiple departments
- Release time for project staff
- Affect change to the faculty reward system
- Encourage mentoring and STEM graduate students

CREST

What Reviewers Look For

- Unifying research focus
- Long-term institutional objectives & priorities consistent with project
- Potential to reach national/international standards of excellence
- Ability to produce demonstrable achievements within award period
- Potential to develop national competitiveness

CREST

Examples of Impact

- CREST funds half of all NSF-supported research at HBCUs*
- 8 new STEM** Ph.D. programs have been established at CREST institutions
- The CREST at Tennessee State University was the first to "see" planets circling another star
- The CREST at Hampton University has developed a surgical probe to detect early-stage cancer
- The CREST at CSU-LA formulated a spatially explicit model of marine predator-prey dynamics, providing an alternative to verbal hypotheses prevalent for more than 30 years

* Historically Black Colleges & Universities
** Science, Technology, Engineering & Mathematics

National Map, 2003-2004

Selected CRESTs

- Nanomaterials Characterization/Science and Processing Technology – *Howard University*
- Center for Microscopic Modeling and Simulation – *City College, City University of New York*
- Computational Center for Molecular Structures and Interactions – *Jackson State University*

Selected CRESTs

- Center for Advanced Materials & Smart Structures – *North Carolina A&T State University*
- Center for Materials Research – *Norfolk State University*
- Synthesis, Manufacturing & Characterization of Structural Nanocomposites – *Tuskegee University*

HBCU-RISE

Historically Black Colleges and Universities – Research Infrastructure for Science & Engineering

[Formerly "THRUST," "HBCU Doctoral Research Capacity Building"]

- Initiative within CREST, new in 2004
- Up to 4 Standard Grants per year
- Up to $1 M, 36 months
- Annual reports
- Program Solicitation: 04-574
- Full Proposal Deadline: July 26, 2005

Objectives

- Enhance research productivity
- Promote production of new knowledge
- Promote the development of STEM Ph.D. programs
- Increase production of doctoral students & graduates

HBCU-RISE

Eligibility

- Historically Black Colleges and Universities that offer offer doctoral degrees in STEM disciplines
- Applicants may have a past or current CREST award

HBCU-RISE

Activities

- Research (collaboration)
- Links with other research centers or national labs
- Faculty hires/professional development
- Research training & preparedness of graduate students
- Expanded student career options
- Equipment/infrastructure improvements
- Computing & Networking

HBCU-RISE

Portfolio

Tennessee State University
- Computer Information & Systems Engineering
- Support for 13 faculty members and 36 graduate students

Alabama A&M University
- Infrastructure of Physics department
- Expand research in sensor science and technology

Morgan State University
- Biological and Chemical sensors – equipment, travel, Research support of graduate and undergraduate students, administrative and technical staff

Program Contact

Centers for Research Excellence
in Science & Technology (CREST)
Historically Black Colleges and Universities –
Research Infrastructure for Science & Engineering (HBCU-RISE)

National Science Foundation
Directorate for Education and Human Resources
Division of Human Resource Development
4201 Wilson Blvd., Room 815
Arlington, VA 22230
Web: http://www.ehr.nsf.gov/ehr/hrd/crest.asp

Victor A. Santiago, Ph.D.
Phone (703) 292-4673 Fax (703) 292-9018 vsantiag@nsf.gov